

**ABSTRACT OF THE DISCLOSURE**

Data transfer between a secure computer and a number of input/output units occurs via a bus control unit connected to the secure computer and a serial bus system. The bus control unit cyclically activates the input/output units connected to the bus system and transfers multi-bit message to the respective activated input/output unit. In order to produce a data transfer method which enables security/related signals to be transmitted via a non-error-protected bus system, at least one of the input/output units is designed as a security unit. Further, the multi-bit message transferred to the security unit has at least one checkbit. The security unit interprets the transferred multi-bit message as correct only if the checkbit alternates within a predefined monitoring period.